Claims 50, 56, 77, and 83, further recite that the polypeptide is "immunogenic." Support for this term can be found, for example, on page 7, lines 9-11 and pages 38 and 39.

Claims 51, 57, 78, and 84 further recite that the polypeptide comprises an amino acid sequence "having up to 475 amino acids." Support for this term can be found, for example, on page 7, lines 3-5.

Claims 52, 58, 79, and 85 recite that the polypeptide comprises an amino acid sequence "having up to 460 amino acids." Support for this term can be found, for example, in Figure 2B, in particular Ntype4; page 6, lines 11-12; and page 37, lines 22-24 of the specification.

Claims 53 and 80 recite a pharmaceutical composition comprising a polypeptide having the sequence of SEQ ID NO: 5 and 11 and a pharmaceutically acceptable adjuvant, carrier, or diluent. Support for a "pharmaceutical compositions" can be found, for example, on page 40-41 of the specification. Support for an "acceptable adjuvant, carrier, or diluent" can be found, for example, on page 41 and on page 39, lines 8-9 of the specification.

Claims 59 and 86 recite a fragment of a polypeptide that does not bind to choline and has lectin activity and comprises "at least 52" consecutive amino acids of SEQ ID NO:24 and 7 respectively. Support for this term can be found, for example on page 6, line 15 of the specification.

Claims 60, 61, 62, 63, 67, 68, 87, 88, 89, 93, and 94 recite an amino acid sequence comprising the sequence of SEQ ID NO: 5, 3, 1, 24, 4, 22, 11, 9, 7, 10, and 23 which comprises "one to 57 amino acid substitutions" and the polypeptide retains "lectin activity" and "does not bind choline". Support for the phrase "one to 57 amino acid substitutions" can be found on page 13, lines 5-31 and page 14, lines 1-12 of the specification. Support for the recited "lectin binding activity" can be found throughout the specification. See, for example, page 20, lines 18-25 and in Example 2. Support for the term "does not bind choline" can be found, for example, on page on page 20, lines 19-21 of the specification.

Claims 64 and 90 recite an amino acid sequence comprising an amino acid sequence having the sequence of SEQ ID NO: 5 and 11 which comprises "one to 57 amino acid substitutions" and the polypeptide is "immunogenic against bacterial infection". Support for "one to 57 amino acid substitutions" has been discussed above. Support for "immunogenic against bacterial infection" can be found throughout the specification. See, for example, page 20, lines 30-31, page 37, lines 17-32 and pages 38 and 39 and Examples 3 and 4.

Claims 65 and 91 recite an amino acid sequence comprising the sequence of SEQ ID NO: 5 and 11 and which comprises "one to 57 amino acid substitutions" wherein the amino acid substitutions comprise "host preferred amino acid substitutions". Support for "one to 57 amino acid substitutions" has been discussed above. Support for "host preferred amino acid substitutions" can be found, for example, on page 13, lines 5-11 of the specification.

Claims 66 and 92 recite an amino acid sequence comprising the sequence of SEQ ID NO: 5 and 11 wherein the sequence comprises "one to 57 amino acid substitutions" wherein the amino acid substitutions comprise "conservative amino acid substitutions". Support for "one to 57 amino acid substitutions" has been discussed above. Support for "conservative amino acid substitutions" can be found, for example, on page 26, lines 19-31 and page 27 of the specification.

Claim 69 recites an analog of an amino acid sequence comprising SEQ ID NO:1, 3, 4, 5, 22, 24, 7, 9, 10, 11 and 23. Support for the term "analog" can be found, for example, on page 21, lines 9-12 of the specification.

Claim 70 recites a derivative of an amino acid sequence comprising SEQ ID NO: 1, 3, 4, 5, 22, 24, 7, 9, 10, 11 and 23. Support for the term "derivative" can be found, for example, on page 21, lines 15-20 of the specification.

Claim 71 recites a polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 1, 3, 4, 5, 22, 24, 7, 9, 10, 11 and 23, which comprises "one to 57 amino acid substitutions" and the polypeptide retains "native tertiary structures". Claims 72 and 98 also recites the phrase "retains native tertiary structure". Support for the phrase "one

to 57 amino acid substitutions" can be found on page 13, lines 5-12 of the specification. Support for the phrase "retains native tertiary structure" can be found for example, on page 7, lines 6-8 of the specification.

Claim 73 recited a "vaccine" comprising a polypeptide having the amino acid sequence set forth in SEQ ID NO: 1, 3, 4, 5, 22, 24, 7, 9, 10, 11 and 23. Support for the term "vaccine" can be found, for example, on page 6, line 2.

No new matter has been added by way of these claim amendments.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those, which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

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"Express Mail" Mailing Label Number: EL868639252US Date of Deposit: June 7, 2002 I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Box CPA, Commissioner for Patents, Washington, DC 20231. Rebecca Kerney Rebecca Kerney	**CERTIFICATION OF FACSIMILE TRANSMISSION** I hereby certify that this paper is being facsimile transmitted to the U.S. Patent and Trademark Office at Fax No. _____ on the date shown below. Rebecca Kerney (Type or print name of person signing certification.) N/A Signature Date

Version with Markings to Show Changes Made:

Please replace page 5, line 9-10 with the following text:

Comparison of homologies of various serotypes of the nucleic acid and amino acid sequence of the N-terminal region of CbpA ([SEQ ID NO:24 and] SEQ ID NOS: 28-39).

Please replace lines page 74, lines 1-18 with the following text:

This invention provides an isolated polypeptide comprising an amino acid sequence of a N-terminal choline binding protein A truncate in which the amino acid sequence is set forth in any of SEQ ID NOS: 1, 3-7, or 9-11, including fragments, mutants, variants, analogs, or derivatives, thereof.

(Remove hard return)

Also, this invention provides a isolated polypeptide comprising an amino acid sequence of a N-terminal choline binding protein A truncate, wherein the amino acid is set forth in SEQ ID NO 24, wherein the polypeptide retains its native tertiary structure and methods of preparation.

(Remove hard return)

This invention provides an isolated polypeptide comprising an amino acid sequence of a N-terminal choline binding protein A truncate, wherein the polypeptide has lectin activity and does not bind to choline. This invention provides an isolated immunogenic polypeptide comprising an amino acid sequence of a N-terminal choline binding protein A truncate.

(Remove hard return)

This invention provides an isolated nucleic acid encoding a polypeptide comprising an amino acid sequence of a N-terminal choline binding protein A truncate. Lastly, this invention provides pharmaceutical compositions, vaccines, and diagnostic and therapeutic methods of use.